Pankaj Oudhia's Notes on Terminalia arjuna (Roxb. ex DC.) Wight & Arn. [Kirtikar, Kanhoba Ranchoddas, and Baman Das Basu. "Indian Medicinal Plants." Indian Medicinal Plants. (1918)].

- Posted by Pankaj Oudhia on April 26, 2014 at 7:17
- View Blog

Pankaj Oudhia's Notes on Terminalia arjuna (Roxb. ex DC.) Wight & Arn. [Kirtikar, Kanhoba Ranchoddas, and Baman Das Basu. "Indian Medicinal Plants." ***Indian Medicinal Plants.*** **(1918)].**

Pankaj Oudhia

Introduction

Based on Ethnobotanical surveys since year 1990 in different parts of India Pankaj Oudhia has documented vital information about Medicinal Plants mentioned in the famous publication by Kirtikar and Basu (1918). Through this research document Pankaj Oudhia has tried to present original document with additional notes. For complete paper with pictures, Interactive Tables, Video and Audio clips please visit pankajoudhia.com

For original publication by Kirtikar and Basu (1918) please visit https://archive.org/details/indianmedicinalp01kirt

494. T. Arjuna, Bedd. h.f.b.i., ii. 447.

Syn. : — Pentaptera Arjuna, Roxb. 382.

Sans. : — Arjuna ; Kukubha.

Vern. : — Anjan, arjun, kahu (H.) ; Vella marda, Vellai-

maruda-maram (Tarn.) , Ver maddi (Tel.) ; Sanmadat, arjun,

N. 0. C0MBRETACE2E, 545

anjan, jamla (Mar.); Sadado, arjun sadado (Guz.) ; Maddi, tormatti, holematti, billi matti (Kan.).

Habitat:— Very common in the Sub-Himalayan tracts of the North- West Provinces and Deccan.

A large deciduous tree, with huge, often buttressed, trunk, attaining 60-80 ft. Bark Jin. thick, smooth, pinkish grey, the old layers peeling off in thin flakes. Sapwood reddish-white ; heartwood brown, variegated, with darker, coloured streaks, very hard. Glabrous ; only the inflorescence is slightly pubescent. Leaves generally sub-opposite, hard coriaceous, oblong, sometimes spathulate-oblong, often campanulate blade 3-6, petiole Jin. long. Petiole rarely more than Jin., with . two glands near its apex often very short. Flowers bisexual, dull, yellow, in erect terminal panicles. Bracteoles very small. Calyx-teeth nearly glabrous, both within and without. Young

ovary very short, covered with crisped brown or rufous hair.

Fruit lin. long, with 5-7 narrow angles, Jin. broad, irregularly marked with ascending lines.

Use : — The Sanskrit writers consider the bark to be tonic, astringent and cooling, and use it in heart diseases, contusions, fractures, ulcers, &c. In fractures and contusions, with excessive ecchymosis, powdered arjun bark is recommended to be taken internally with milk. A decoction of the bark is used as a wash in ulcers and chancres (Dutt).

The bark is astringent and febrifuge, the fruit tonic and de-obstruent, the juice of the fresh leaves is a remedy for ear-ache.

The bark useful in bilious affections, and as an antidote to poisons (Baden-Powell's Punj. Prods.) In Kangra, the bark is used to sores, &c. (Stewart).

[Pankaj Oudhia's Comment: ***Arjun is used as medicine throughout India. I have documented information about over 600,000 Traditional Herbal Formulations (so far) in which Arjun plant parts are added as important ingredient. In over 100,000 Traditional Herbal Formulations used for Hearst diseases Arjun is added as primary ingredient. Arjun is added as secondary ingredient in over 150,000 Formulations used for respiratory diseases. Every year millions of patients suffering from respiratory diseases are given Arjun in form of Kheer on the occasion of Sharad Poornima. As senary ingredient Arjun in added in thousands of Herbal Formulations used for treatment of ulcer. The Traditional Cancer Experts are using Allelopathically enriched Arjun plant parts in treatment of different types of cancer. Thousands of Arjun based Traditional***

***Herbal Formulations are waiting for validation through clinical trials under frame of modern science. Please see Table Arjun-1 to Arjun-150 for exhaustive list of Arjun based Herbal Formulations*.]**

<iframe width="420" height="315" src="//www.youtube.com/embed/_JDsuuFSl24" frameborder="0" allowfullscreen></iframe>

<iframe width="420" height="315" src="//www.youtube.com/embed/JCKDC8BNglY" frameborder="0" allowfullscreen></iframe>

<iframe width="560" height="315" src="//www.youtube.com/embed/-B8ZnUWf8K8" frameborder="0" allowfullscreen></iframe>

<iframe width="420" height="315" src="//www.youtube.com/embed/9VBQ5aH_4RU" frameborder="0" allowfullscreen></iframe>

<iframe width="420" height="315" src="//www.youtube.com/embed/Qr-geVLeXxg" frameborder="0" allowfullscreen></iframe>

<iframe width="420" height="315" src="//www.youtube.com/embed/S1WqxkubSzE" frameborder="0" allowfullscreen></iframe>

Regarding the physiological action of this drug, Dr. Lai

Mohan Ghoshal writes : —

(1) The drug (Terminalia Arjuna) acts as a cardiac stimulant and tonic, increasing the force of the beats of the heart, but slowing their number, but never completely stopping it. The diastole is more or less prolonged.

(2) The blood pressure is increased due to the contraction of the peripheral arterioles caused by the action of the drug on the vasomotor nerve possibly.

(3) It acts as a powerful haemostatic ; only drawback for this action is the rise of blood pressure.

546 INDIAN MEDICINAL PLANTS.

(4) It helps diapedesis of red blood corpuscles.

(5) It slightly increases the excretion in the amount of phosphates and uric acid, but the increase is not very material to be taken into practical account.

Regarding its Therapeutic action, he says : —

The drug is a very valuable remedy in heart diseases, specially where a combined tonic and stimulant action is necessary. Thus in mitral disease, specially in later stages when the heart is feeble and flaccid, blood pressure low and the heart dilated, the drug may be administered with admirable effect. In aortic diseases the drug has one defect, namely, it increases the blood pressure, and the diastole is rather prolonged, but the force of contraction and the manner is which the aortic valves meet together may be utilised in these forms of aortic regurgitation that are caused merely by dilatation of the aorta, or in which the valves, although healthy, do not come in firm opposition, or in which the regurgitation is caused by weakness of the heart.

In exhausting diseases weakening the heart and increasing the frequency of the pulse the drug is invaluable, for, it does not exert the poisonous action of digitalis if long continued. **[Pankaj Oudhia's Comment: *Very true*.]**

The drug may be used as a good local haemostatic, but generally its use as a haemostatic is doubtful on account of the rise of the blood pressure. In inflammations locally and generally it may be used by causing the contraction of the peripheral arterioles, and increasing the diapedesis, and at the same time improving the general circulation, the drug will relieve the inflammatory condition of the part. For this reason Chukradutta recommended it for all

sorts of inflammatory conditions, and he goes so far as to say that it heals fractures, etc. For this reason it may be commended in pneumonic inflammations of lung, but directly it has no action on respiratory organs.

We have seen that for local inflammations the drug is very efficacious as in the experiments performed on inflamed eyes. There the inflammation soothed in one day although the eases were mild ones. The drug has been suggested to be lethontryptic, but except increasing slight amount of phosphatic and uric acid excretion this action of the drug is doubtful.

Chemical composition : —

An extract from the bark was prepared by heating 500 grms. of pulverised bark with 2 litres of water until only 500 c. c. of the fluid remained ; the whole thing was then pressed through a fine muslin and the fluid part was again filtered through filter when a clear dark-reddish extract was obtained. The extract is sweetish to the taste, reduces Fehling's solution and assumes a dark black colour on treatment with ferric chloride and is acid to litmus. Part of it was treated with benzene in equal parts (being acidulated first with H 2 S0 4) and a deposit separated out in the immiscible layer; the immiscible layer was then separated by means of separating funnel and benzene was allowed to evaporate. The residue left after evaporation was reddish-brown in colour and amorphous powder ; it was insolube in dilute HC1. but partly soluble in alcohol and ether. It does not give any reaction with Iodine,

nor does it reduce Fehling's solution, but when heated with dilute HC1, it reduced Fehling's solution also gave ppt, with Phosphotungstic acid.

N. 0. COMBRETAOE.E. 547

Thus we see that the extract when treated with benzene yielded a substance which is partially soluble in alcohol, and does not give any Iodine reaction, reduces Fehling's solution when heated with dilute HC1 and is pptd. by phosphotungstic acid. From these facts we may conclude that the substance yielded from the treatment of the extract with benzene is glucosidal in nature, the glucosidal body was first made soluble in absolute alcohol, which was then evaporated, and a dry brown powdery residue was left ; it also gave no reaction with Iodine, reduced Fehling's solution when heated with dilute HC1.

The extract was then treated with chloroform in the same way, and a gummy substance was obtained which either gave Orcin reaction nor reduced Fehling's solution even when heated with dilute hydrochloric acid.

The extract was then further treated with absolute alcohol when a reddish-brown-colouring matter was separated out.

It gave no reaction with petroleum either. Tannic acid was estimated by Allen and Pleteker 4 s method and total tannin (including glucotannic acid, etc.) obtained was 12 per cent.

The bark was then burnt and the ash yielded was 30 per cent., most of which was calcium carbonate, but traces of sodium carbonate and chlorides of the alkali metals was also obtained. Sugar estimated from the original solution was 17 per cent.

Thus we see that the extract from the bark yields—

1. Sugar.

2. Tannin.

3. A colouring matter.

4. A body glucosidal in nature.

5. Carbonates of calcium and sodium and traces of chlorides of alkali metals. (Food and Drugs No. 1 pp. 22 et seq.)

E-documents on Terminalia arjuna

http://ecoport.org/ep?SearchType=earticleList&Author=oudhia&...

Citation

Oudhia, Pankaj (2013). Pankaj Oudhia's Notes on Terminalia arjuna (Roxb. ex DC.) Wight & Arn. [Kirtikar, Kanhoba Ranchoddas, and Baman Das Basu. "Indian Medicinal Plants." ***Indian Medicinal Plants.*** **(1918)]. www.pankajoudhia.com**

Views: 56

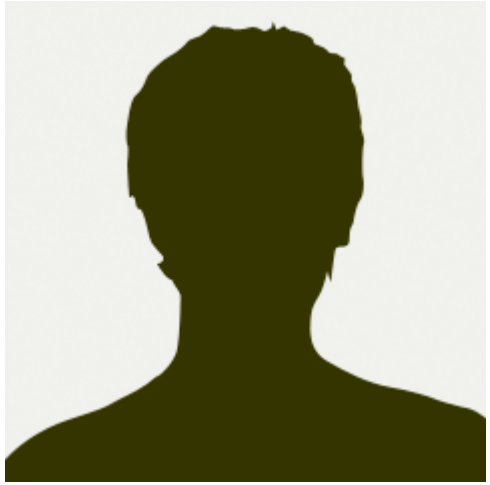
- < Previous Post
- Next Post >

Add a Comment

You need to be a member of Research and Media Network to add comments!

Join Research and Media Network

About



Matthew Wright created this Ning Network.

Welcome to
Research and Media Network

Sign Up
or Sign In